REMARKS

Claims 1, 2 and 4-16 are pending in this application. Claims 1, 2 and 4-8 are amended, claim 3 is canceled, and new claims 9-16 are added. Claims 1, 2 and 4-8 are amended to conform to U.S. claim format, for example, by eliminating figure reference numbers.

No new matter is added to the application by this Amendment. Support for the features added to claim 1 can be found in paragraphs [0001], [0007] and [0011] of U.S. Patent Publication 2007/0158256 (hereinafter "the 256 publication") for the present application. The features added to claim 5 find support in paragraph [0026] of the 256 publication. New claims 9-16 find support in claims 9-16 in the corrected version of International Publication No. WO 2005/082499 (published on October 11, 2007) from which the present application claims priority to. For the convenience of the Patent Office, a copy of the corrected version of WO 2005/082499 is attached herewith. Additionally, the Applicants submit, for the convenience of the Patent Office, that new claims 9-16 also find support in paragraphs [0018], [0019] and [0027]-[0031] of the 256 publication.

Reconsideration of the application is respectfully requested.

I. Rejection Under 35 U.S.C. §102

Claims 1-5 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,958,243 to Lawrence et al. (hereinafter "Lawrence"). The rejection is respectfully traversed.

The Patent Office alleges that Lawrence teaches each and every feature recited in claims 1-5. Applicants respectfully disagree with this allegation.

Lawrence fails to teach or suggest a controller adapted to operate the shut-off valve at a high frequency as required by claim 1.

Lawrence discloses to a membrane filtration system that allows periodic reversal of fluid flow across the membrane (backwashing) while reducing or eliminating large hydraulic pressure pulses at the start and/or the completion of the backwash procedure. The exemplary embodiment shown in Fig. 3 and cited in the Office Action depicts a system that comprises a valve 9. During the filtration of fluid, the valve 9 is in an open condition and while during backwashing the valve 9 is closed. Nothing in Lawrence teaches or suggests that valve 9 is operable at a high frequencies, as required by present claim 1. The reason for this is that the system disclosed by Lawrence has two distinct modes, namely a filtration mode and a backwash mode. The system of Lawrence is periodically switched between the filtration and bachwash modes, but not at high frequency as recited in the present claims. Specifically, col. 10, lines 6-14 of Lawrence discloses:

> Backwash, using the conventional method of reversing the flow through the membrane was used. The sequence involved: (1) flowing effluent to the microfiltration chamber for 360 seconds; (2) reversing the flow and recirculating wash solution back through the microfilter under pressure to achieve backwashing for 40 seconds; (3) again reversing directing and flowing effluent to the microfiltration chamber for another 360 seconds; and then (4) dead-end backwashing the microfilter for 40 seconds.

Thus, Lawrence teaches a system that has a filtration interval of 360 seconds and a subsequent backwashing period of 40 seconds. The system having filtration intervals of 360 seconds and the backwashing periods of 40 seconds according to Lawrence fails to not teach or suggest the controller configured to operate the shut-off valve at a high frequency as required by

claim 1.

Additionally, the backwashing periods of Lawrence involve flow direction reversal of bulk fluid volumes (for example the fluid in the permeate chamber 5). Lawrence teaches away from the controller configured to operate the shut-off valve at a high frequency of claim 1 because the pressure buildup according to Lawrence requires the (bulk) fluid present in the pipe segment comprising valve 14 to be periodically put into motion which adds to the inertia of the system.

Because the features of independent claim 1 are neither taught nor suggested by Lawrence, Lawrence cannot anticipate, and would not have rendered obvious, the features specifically defined in claim 1 and its dependent claims.

For at least these reasons, claims 1, 2, 4 and 5 are patentably distinct from and/or non-obvious in view of Lawrence. Reconsideration and withdrawal of the rejections of the claims under 35 U.S.C. §102(b) are respectfully requested.

II. Rejection Under 35 U.S.C. §103

Claims 6-8 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Lawrence in view of U.S. Patent No. 4,749,476 to Storkebaum et al. (hereinafter "Storkebaum"). The rejection is respectfully traversed.

Storkebaum does not remedy the deficiencies of Lawrence as described above with respect to claim 1, from which claims 6-8 depend. Claims 7 and 8 either directly or indirectly depend from claim 6.

The Patent Office acknowledges that Lawrence fails to teach or suggest the feature, a

retentate circulation circuit, of claims 6 (see pages 4 and 5 of the Office Action). The Patent Office introduces Storkebaum as allegedly remedying these deficiencies of Lawrence. The Patent Office alleges that it would have been obvious to provide the system disclosed by Lawrence with a retentate circulation circuit as taught by Storkebaum in order to return the retained substance to the feed supply, if desired to do so. Applicants respectfully disagree with these allegations.

As discussed with respect to claim 1, Lawrence does not teach or suggest a controller adapted to operate the shut-off valve at a high frequency as required by claim 1. Storkebaum fails to remedy the deficiencies of Lawrence because Storkebaum does not teach or suggest operating a valve at a high frequency. Thus, neither Lawrence nor Storkebaum, taken singly or in combination, teaches or suggests a controller adapted to operate the shut-off valve at a high frequency as required by claim 1.

Because these features of independent claim 1 are not taught or suggested by Lawrence and Storkebaum, taken singly or in combination, these references would not have rendered the features of claim 1 obvious to one of ordinary skill in the art.

For at least these reasons, claims 6-8 are patentable over Lawrence and Storkebaum. Thus, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

III. New Claims

Neither Lawrence nor Storkebaum, taken singly or in combination, teaches or suggests the required features of the apparatuses of new claims 9-14 or the methods of new claims 15 and 16.

For at least this reasons, new claim 9-16 are patentable over Lawrence and Storkebaum,

taken singly or in combination.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2 and 4-20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Early and favorable action is earnestly solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,

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